

From glowbugs@theporch.com Mon Nov 18 15:50:56 1996  
Return-Path: <glowbugs@theporch.com>  
Received: from uro (localhost.theporch.com [127.0.0.1]) by uro.theporch.com  
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Date: Mon, 18 Nov 1996 15:41:37 -0600 (CST)  
Message-Id: <199611182141.PAA25532@uro.theporch.com>  
Errors-To: conard@tntech.campus.mci.net  
Reply-To: glowbugs@theporch.com  
Originator: glowbugs@theporch.com  
Sender: glowbugs@theporch.com  
Precedence: bulk  
From: glowbugs@theporch.com  
To: Multiple recipients of list <glowbugs@theporch.com>  
Subject: GLOWBUGS digest 356  
X-Listprocessor-Version: 6.0c -- ListProcessor by Anastasios Kotsikonas  
X-Comment: Please send list server requests to listproc@theporch.com  
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GLOWBUGS Digest 356

Topics covered in this issue include:

- 1) Langevin Monitor Amp Schematic?  
by tomrice@netcom.com (Tom R. Rice)
- 2) Re: Introduction  
by "Brian Carling" <bry@mail1.mnsinc.com>
- 3) Re: Tube gear (fwd)  
by "Brian Carling" <bry@mail1.mnsinc.com>
- 4) Re: Crystal Etching and Ammonium Bifluoride  
by Roy Morgan <morgan@speckle.ncsl.nist.gov>
- 5) Re: 6BM8 xmtr construction.  
by lee@radioadv.com (Lee Richey)
- 6) 6L6 prototype -- the results  
by jeffd@coriolis.com (Jeff Duntemann)
- 7) 6BM8 schematic  
by lee@radioadv.com (Lee Richey)
- 8) Re: 6L6 prototype -- the results  
by rdkeys@csemail.cropsci.ncsu.edu
- 9) Re: 6L6 prototype -- the results  
by lee@radioadv.com (Lee Richey)
- 10) Tube For sale  
by Merv Schweigert <k9fd@htc.net>

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Date: Sun, 17 Nov 1996 17:41:34 -0800 (PST)  
From: tomrice@netcom.com (Tom R. Rice)  
To: boatanchors@theporch.com (ba)

Cc: glowbugs@theporch.com (glowbugs)  
Subject: Langevin Monitor Amp Schematic?  
Message-ID: <199611180141.RAA00896@netcom2.netcom.com>

Back in those happy days of yesteryear, an outfit named Langevin offered a line of quality audio equipment for the recording and broadcast industries.

My bottomless barn has yielded two Langevin Type AM 5117 Program Booster/Monitor Amplifiers. These use two type 5879 tubes driving a pair of 6V6 tubes for a maximum power of eight watts out, with a fixed gain of 55 dB.

I have only the catalog sheet on these amps, but need the schematic (or at least a pin-out of the rear connector; these were designed to slide into a tray-type mount).

Perhaps some kind ex-broadcaster could save me from many tedious hours of circuit tracing? The usual cost-support guarantees apply.

Thanks & 73 de WB6BYH

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"Start off every day with a smile and get it over with." --W.C.Fields  
Tom R. Rice  
tomrice@netcom.com  
CIS: 71160,1122

-----  
Date: Mon, 18 Nov 1996 04:52:44 +0000  
From: "Brian Carling" <bry@mail1.mnsinc.com>  
To: johnf@innotts.co.uk, glowbugs@theporch.com  
Subject: Re: Introduction  
Message-ID: <199611181249.HAA03159@user2.mnsinc.com>

HEY! It's a reply from AF4K / G3XLQ

Hello John - are you still here on GLOWBUGS?

How is the WS128 coming along?

I used to have a pair of WS 38 sets, but they weren't very good. Probably because I didn't know what I was doing with them at the time. I was only 13 years old! I used to dread the appearance of a

GPO detector van in my neighbourhood after school in case they had "detected" my 300 mW transmissions on those things!  
We couldn't even get 1/2 mile contact out of them for some reason!

I remember the other kid half way down the village yelling "JAMES ONE, THIS IS JAMES TWO - OVER!" many times hoping to get me!

Yes, JOHN MEDLOW, that was HIS name. His family had a farm, and in the barn next to their house, he had some OLD OLD trf radio receiver that had these funny coils that were wound like a pancake!!!

He operated in the barn with a longwire aerial, and I had the same back at my house perhaps 1/2 a mile away. No signals were ever heard, but if we got the radios within about 100 yards of each other they worked. Probably a terrible mis-match. Best that I remember, they used 4 or 5 very small valves, and tuned about 6.0 - 7.5 MHz

On 1 Oct 96, John Fletcher wrote:

> Hello Glowbuggers!

>

> I subscribed to this list a few days ago and this is my first  
> posting. I got my licence in June 1975 and used a single 6V6  
> oscillator on 40 metres. This was inspired by the Bare Essentials  
> rig built by my friend Jeremy G4EHX. Two months later I bought a  
> Codar AT5, 10 watts input on 160 and 80 AM and CW, which I used with  
> a Hallicrafters S20 Sky Champion. I still have the AT5 which I hope  
> to use again soon. I've not been active on HF for some years but I  
> moved house last year and now have a fairly large garden (by English  
> suburban standards) and this week I erected a W3EDP antenna with its  
> counterpoise in the cellar. I made my first contact on that aerial  
> this evening; 579 from DL0AQB using 4 watts out on 40 metres. I  
> think my discouraging early attempts at QRP were let down by an  
> inefficient aerial.

>

> One winter project here is to put a WS128 set back on the air. This  
> is a 1960s military transmitter/receiver covering 2 to 8MHz and  
> using battery valves. I think it was the last of the valve "spy  
> sets". I'll keep you informed.

>

> Glad to be a part of this list, and I read every posting with  
> increasing enthusiasm.

>

> 72/73 de John G4EDX G-QRP 2038

>

>

\*\*\*\*\*

\*\*\* 73 from Radio AF4K / G3XLQ in Gaithersburg, MD USA \*

\*\* E-mail to: bry@mnsinc.com \*

\*\*\* See the great ham radio resources at: \*

\*\* <http://www.mnsinc.com/bry/> \*

\*\*\*\*\*

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Date: Mon, 18 Nov 1996 04:52:44 +0000

From: "Brian Carling" <bry@mail1.mnsinc.com>

To: rdkeys@csemail.cropsci.ncsu.edu, glowbugs@theporch.com

Subject: Re: Tube gear (fwd)

Message-ID: <199611181249.HAA03165@user2.mnsinc.com>

HEY! It's a reply from AF4K!

Say Bob, how is your 833 project coming along?

I though 600V at 100 mA was a little over-conservative for one of those!

Aren't they capable of taking a few HUNDRED watts of input power?

Best I remember seeing one or two at Don Hoisington's shack (W4CJL) a few years ago in Alabama, and the tube looked like it was an unusual shape, and had a large, thick carbon anode (that's "plate" for you colonials!) that was bigger than an 813!

Now an 813 can loaf at 200 watts, so why only stick 60 watts to the 833?

Or am I mixed up about these bottles?

Bry

On 1 Oct 96, rdkeys@csemail.cropsci.ncsu.e wrote:

> > Glowbuggers:

> >

> > Here's what \*I\* think you should do:

> >

> > First, build the Hartley from the plans Bob has posted (the 1934

> > QST article), and use a type 45 tube if you can find one. Build

> > it strong and tough and don't scrimp on the parts.

>

> Well, 45's be a tad hard to find, but almost any triode will work,

> in that circuit, even an 833 broadcast transmitter

> pull.....(:+{}..... These 833's can be had for 5 bucks often at

> hamfests as pulls.

>

> If you build it big time, scale up all the physical parts to handle

> the load. The coil should be 1/4,3/8,1/2 inch tubing for the

```

> 100/250/1kw class.
>
> > Second, buy from Svetlana an SV811-3 tube ($30), and plug it into
> > the same rig, get an 800 volt power supply, and run an eighth of a
> > killowatt.
>
> I talked with the designer/fellow who was in on telling Svetlana how
> to make the good 811 into this single ended '10 style form factor.
> He was telling me it should work quite well in Hartleys et al.....
> The result was this SV811-3 (lo-mu) and SV811-10 (hi-mu) tube
> designs. He may slip me one of the prototypes to play with. If it
> will work in Grandma Hartley I will be most pleased. He suggested
> the -10 rather than the -3 because of the higher gain at RF. He
> builds those hotrod audio amps, commercially, and is always chasing
> after my '211's, but I think he is on the level on this Svetlana
> thing. I may give him a call this week and see if I can get one for
> test purposes.
>
> > Third, spring for $80 and buy one of their SV573-160's with the
> > carbon cathode and run a toasty one-third killowatt.
>
> Well, now were in the 250 watter style ballpark!
>
> > THEN we'll see what signals pierce through the ether o' these late
> > nights on the ol' QRG!
>
> Actually I have been saving up 833's for such a project, and have
> most of the parts ready to go. Still need to finish a coil and get
> everything mounted. I figure about 600v at 100ma on the 833 should
> make it idle like a pussycat, but roar like a lioness. For testing
> I have a 300v plate battery at one amp ready to go. I still need a
> good RF choke wound for it, yet, but it is getting there.
>
> > -- Roy Morgan/Building 820, Room 562/Gaithersburg MD 20899
>
> 73/ZUT DE NA4G/Bob UP
>
>
*****
*** 73 from Radio AF4K / G3XLQ in Gaithersburg, MD USA *
** E-mail to: bry@mnsinc.com *
*** See the great ham radio resources at: *
** http://www.mnsinc.com/bry/ *
*****

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Date: Mon, 18 Nov 1996 09:22:04 -0500

From: Roy Morgan <morgan@speckle.ncsl.nist.gov>  
To: glowbugs@theporch.com  
Subject: Re: Crystal Etching and Ammonium Bifluoride  
Message-ID: <9611181422.AA12715@speckle.ncsl.nist.gov>

At 07:17 PM 11/15/96 -0600, Doug Dunn, K7YD wrote:

Would it be better to grind (or safer anyhow) and  
>then degrease the blanks with Trichlor?

I suggest the old standby - WINDEX. Just make up a little wire holder to grab the blank by two corners. Slop the thing in Windex full strength, then water (distilled). A few drops of Joy or similar in each cup of rinse will help smooth evaporation. If you are in a big hurry, use acetone (NOT nail polish remover which has oils in it) with VENTILATION. If you're not in a hurry, hang the little holder on a nail and come back in a few minutes, or have a muffin fan blowing on it.

A nice refinement would be a hanger for the crystal holding tool just above the 5Y3 rectifier so it's warmth would dry it quickly.

>  
>I can see a feller might want to construct a small oscillator for test  
>of these little crystals...

Yup. I've decided on a 6U8. Untuned plate resistor in the tetrode Pierce oscillator, and lightly couple the plate to the triode as a cathode follower out to a BNC connector to your counter or receiver. A milliammeter in the grid resistor will give you an indication of activity.

-- Roy Morgan/Building 820, Room 562/Gaithersburg MD 20899  
(National Institute of Standards and Technology, formerly NBS)  
301-975-3254 Fax: 301-948-6213 morgan@speckle.ncsl.nist.gov --

-----  
Date: Mon, 18 Nov 1996 09:33:03 -0500  
From: lee@radioadv.com (Lee Richey)  
To: <glowbugs@theporch.com>  
Subject: Re: 6BM8 xmtr construction.  
Message-ID: <19961118144525473.AAD224@lee.radioadv.com>

>  
> By the way, Lee.... Can you tell us WHERE to buy those nifty trimmer  
> caps? Bry & the 6BM8'ers!

>

The caps were obtained from a local company as surplus. I have the name of the manufacturer and am talking to them about getting some more. They have minimum orders though and I am waiting for a quote from them.

I'll let you know what I find out.

-Lee- -WA3FIY-

<http://www.radioadv.com>

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Date: Mon, 18 Nov 1996 08:57:32 -0700

From: jeffd@coriolis.com (Jeff Duntemann)

To: glowbugs@theporch.com

Subject: 6L6 prototype -- the results

Message-ID: <1.5.4.32.19961118085246.00b2e26c@ntserver.coriolis.com>

Hi gang--

This weekend I finally finished the prototype 6AG7/6L6 rig I've spoken of here in recent weeks. It generated power right off the bat--with the downside that the pi net will not tune or load properly on 40m. As an 80m rig it's killer, but the intent was to create a pi net that would work on both 80 and 40 without taps or switching. I'm pretty sure at this point that the tank coil is too big, and the next step is to knock a few turns off of it and try it again.

But I stuck to 80m and did something interesting: I rummaged through my tube collection and drug out every 7S power tube I could find (and hey, anybody know what the difference between a 7AC and 7S base is? I see no difference in the '65 Handbook illos...) and tried them all in the rig. They all worked...and there were some surprises.

The rig was powered by a junkbox homebrew ps I got at a hamfest in a \$50-takes-it-all kind of deal. It's got a key-down voltage of 350 or so, but the regulation is terrible (key up is about 475) so I didn't put the rig on the air for fear of chirping, tempted tho I was. I will try other and better power supplies I have on hand once I can get some Jones plug cables together for them.

So here are the results. PO was measured on a B&W 374 dummy load/wattmeter. Test frequency 3720:

Tube	Plate ma	Power out
=====		

6L6GC	63	13W
5881	60	12W
6K6G	35	8W
6550	63	14W
6F6G	30	8W
6V6G	50	10.5W
6W6GT	55	11.5W

Note that these power measurements are OUTPUT, not input. I didn't measure the screen current so I didn't bother calculating efficiency, but from my experience these numbers seem pretty decent. I was astonished at the showing put in by a ratty Motorola 6W6GT, pulled out of lord-knows-what when I was a teenager in the Sixties, still filthy and smelling vaguely of dog urine (my old dog Hank peed on a box of junk I had in the garage in 1967, and that tube must have been in it!) but pumping power at 20+ watts input!

The 6550, by the way, is a BEAUTIFUL tube. I didn't even know what it was and had never had it out of the box (another of those buy-the-whole-box-and-who-cares-what's-in-it deals) but it's gorgeous, a G-bottle on steroids, muscular and stubby and really cool. When I build this rig for real that 6550 will be in the driver's seat. It wants more juice, which I have on the shelf and will report on once I rig it next weekend.

So...the circuit works, with the caution that it won't load on 40m yet. I'll work on that and post new specs here for the coil when I get it licked.

--73--

--Jeff Duntemann KG7JF  
Scottsdale, Arizona

-----  
Date: Mon, 18 Nov 1996 11:28:41 -0500  
From: lee@radioadv.com (Lee Richey)  
To: <glowbugs@theporch.com>  
Subject: 6BM8 schematic  
Message-ID: <19961118163242790.AAA237@lee.radioadv.com>

There have been a lot of requests for the schematic of the 6BM8 rig I've been discussing. I have the schematic in Circad format but haven't been able to get it to a web page without scanning, and I don't want to scan 'cause it really looks bad.



I just got off the phone with the folks at Circad with what might be good news. They are sending me a beta version of a new release that will create a .pcx file of schematics and layouts. Boy, if that works, we're in business!

I don't know how long it will take to arrive, but as soon as it does, I'll do my best to get something posted.

-Lee- -WA3FIY

<http://www.radioadv.com>

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Date: Mon, 18 Nov 1996 12:37:39 -0500 (EST)  
From: rdkeys@csemail.cropsci.ncsu.edu  
To: jeffd@coriolis.com  
Cc: rdkeys@csemail.cropsci.ncsu.edu (), glowbugs@theporch.com  
Subject: Re: 6L6 prototype -- the results  
Message-ID: <9611181737.AA115528@csemail.cropsci.ncsu.edu>

>  
> Hi gang--  
>  
> This weekend I finally finished the prototype 6AG7/6L6 rig I've spoken of  
> here in recent weeks. It generated power right off the bat--with the  
> downside that the pi net will not tune or load properly on 40m. As an 80m  
> rig it's killer, but the intent was to create a pi net that would work on  
> both 80 and 40 without taps or switching. I'm pretty sure at this point  
> that the tank coil is too big, and the next step is to knock a few turns off  
> of it and try it again.

Jeff.... as a loose rule of thumb, it is possible to tune two bands with one pinet coil, but you need to cut the coil for the higher band with about 100pf of the tuning capacitor. Then use the rest of the tuning capacitor to pad it down to 80M from 40M....(it will take about a 250-365 pf cap in the plate input side to do this with a 40M coil that has a couple of extra turns compared to normal). Note that when you do this, the efficiency will be off a bit, because of the increased capacitance on 80M in the input tank. That will not cause too much problem on a breadboard set, but might on a big rig. It affects the plate impedance of the final (remember there are optimum values of C1 and L and C2 in a pinet design for any given plate voltage and plate current). I don't have the correct formulas in memory, but they are in any late model handbook. For a practical glowbug, it really does not matter that much... just make sure there is enough capacity in the input and output to handle the tuning with good harmonic suppression. As a general rule of thumb, on the input side of the pinet use a 365pf if you have it and on the output use a 3 or 5 section 365pf cap. That way,

you should always have sufficient range on 160/80/40/maybe 30 meters.

> But I stuck to 80m and did something interesting: I rummaged through my tube  
> collection and drug out every 7S power tube I could find (and hey, anybody  
> know what the difference between a 7AC and 7S base is? I see no difference  
> in the '65 Handbook illos...) and tried them all in the rig. They all  
> worked...and there were some surprises.

Yes, isn't that a most wonderful and marvelous finding? There is a whole  
string of similarly based power tubes that you can basically just plug and  
play, within certain limits.

> The rig was powered by a junkbox homebrew ps I got at a hamfest in a  
> \$50-takes-it-all kind of deal. It's got a key-down voltage of 350 or so,  
> but the regulation is terrible (key up is about 475) so I didn't put the rig  
> on the air for fear of chirping, tempted tho I was. I will try other and  
> better power supplies I have on hand once I can get some Jones plug cables  
> together for them.

For general use, I would tend to stick to 450 volts and less and prefer  
a 350 volt power supply for tube longevity, unless a good cooling fan is  
about. That will still give plenty of play power. Some of the lesser  
tubes in the series are hard put to push 450 volts without glowing mighty  
red on their plates!

> 6550            63            14W

>

> The 6550, by the way, is a BEAUTIFUL tube.

Yes it is the King 6L6 in its highest and mightiest configuration!

Tuffy 6L6 will run forever..... but don't let the audio folks know you  
have that 6550, they will come a'runnin' ta snap 'er up!

> So...the circuit works, with the caution that it won't load on 40m yet.  
> I'll work on that and post new specs here for the coil when I get it licked.  
>  
> --73--  
> --Jeff Duntemann KG7JF

Do keep us posted, Jeff..... that is wat globuggin' be all about!

73/ZUT DE NA4G/Bob UP

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Date: Mon, 18 Nov 1996 11:38:47 -0500

From: lee@radioadv.com (Lee Richey)  
To: <jeffd@coriolis.com>,  
Subject: Re: 6L6 prototype -- the results  
Message-ID: <19961118180419474.AAA209@lee.radioadv.com>

>  
> The 6550, by the way, is a BEAUTIFUL tube. I didn't even know what it  
was  
> and had never had it out of the box (another of those  
> buy-the-whole-box-and-who-cares-what's-in-it deals) but it's gorgeous, a  
> G-bottle on steroids, muscular and stubby and really cool. When I build  
> this rig for real that 6550 will be in the driver's seat. It wants more  
> juice, which I have on the shelf and will report on once I rig it next  
weekend.  
>  
Not only is it beautiful, it is also linear (not that it matters in class C  
service).  
If I'm not mistaken, that is the tube Central Electronics used in the 100V  
and  
200V sideband transmitters. Wes Schum wrote about the outstanding  
linearity of the tube compared to others of like power capability.

So Jeff, if you ever do a SSB rig, there is your tube. :-)

-Lee-      -WA3FIY-

<http://www.radioadv.com>

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Date: Mon, 18 Nov 1996 14:28:59 -0600  
From: Merv Schweigert <k9fd@htc.net>  
To: glowbugs@theporch.com  
Subject: Tube For sale  
Message-ID: <9611182028.AA24194@ns.htc.net>

This is not a genuine boatanchor, but thought would offer it  
here first before going on the swap adds.

For Sale New 8877 tube, Eimac 1994 date code, box opened and it  
has been tested in a Alpha 77 amp. Put out 2kw++ output. 300 bucks  
shipped. Is one of a matched pair. May be talked into selling both.

73 Merv

/////\\

(# #)

-----o00-( )-00o-----  
:  
: Merv Schweigert K9FD Collector of Keys, "Bugs", :  
: 9694 S. Prairie Road Paddles, Code related gear :  
: Red Bud IL 62278 Crystals and Old Heathkits :  
: E-Mail k9fd@htc.net Old National HRO NC101 Etc :  
: Ph. 618-282-3953 Always looking please call :  
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End of GLOWBUGS Digest 356  
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